

Remarks

1. This Amendment is responsive to the Office Action dated April 27, 2010. Claims 3, 5-8 and 10 are withdrawn; claims 2, 4 and 12 are cancelled; and claims 1, 9 and 11, 13 and 14 are present for consideration.

2, 3. Claims 2, 4, 9 and 12 are rejected as anticipated by Yoshimoto et al (Yoshimoto). Claims 2, 4 and 12 have been cancelled. Claim 9 has been put into independent form. The Office Action, at page 3, lines 1 and 2 (OA 3/1, 2) is in error. That the fuel is "obstructed by piercing element (4/7), then turning 90 degrees because of the wall (figure 3)" is incorrect. The flow begins to turn before reaching the porous body 7. Referring to the arrows of Fig. 2 and to the arrows in Fig. 3, it is clear that the flow of fuel will be from the inlet 6a through just a small portion of the porous body 7, tangentially, on opposite sides of the piercing member, and will immediately be taking a right turn (as shown in the figures) to enter the flow fields through the inlets 1a. Referring to Fig. 3, the only wall which could possibly be opposite to the tangential flow of fuel through small portions of the porous body is the short end wall above the reference numeral 6; most of the flow will never reach that wall, but will instead have entered the fuel cell flow fields through the fuel inlets 1a. In Yoshimoto, the tangential flow through the porous body is parallel with the wall that changes the flow direction. It is not "substantially normal to the flow of fuel through said permeable baffle", nor does the parallel flow impinge on said surface. There is no disclosure which under any reading of claim 9 can be met by Yoshimoto. Therefore, reexamination and allowance of amended claim 9 over Yoshimoto is respectfully requested.

4. Claims 1 and 13 are rejected as obvious over Yoshimoto in view of Reiser et al (Reiser) and LaPierre et al (LaPierre). OA 4/3-5 is in error. The reason, "in order to provide an additional fuel for the cells" would be achieved by Reiser providing recycled fuel either downstream of the baffle or upstream of the baffle. The controlling law is KSR International v. Teleflex, 82 USPQ 2d 1385, 1396 (U.S.C. 2007). The Court quoted *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) ("*Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness*"). Certainly, providing additional fuel is not some rational underpinning for causing the recycle to be downstream of the baffle rather than upstream of it. For this reason, reconsideration and allowance of claim 9 over Yoshimoto and Reiser is respectfully requested.

OA 4/8-10 is in error because the exhaust valve 172 of Reiser exhausts the fuel flow fields of all of the fuel cells in the stack. This is not what is set forth in claim 1, in which the valve is "in fluid communication with said fuel inlet chamber upstream from said fuel gas inlet manifold". The reason for obviousness in OA 4/9, 10 is "because this would allow for the gas located within the system to be discharged prior to the startup of the system." True, but irrelevant. Claim 1 calls for the discharge to be upstream of "a permeable baffle through which fuel from said chamber is flowed into said fuel gas inlet manifold". "Articulated reasoning" in this instance is irrelevant since it does not relate to the subject

matter being claimed, and therefore does not provide "some rational underpinning to support the legal conclusion of obviousness" (KSR, supra, at 1396).

OA 4/10-12 is in error because there is no identification of which valve, and what exiting gas are being referred to. Furthermore, it is not understood how any valve that controls exiting gas can be downstream of the exiting gas. In any event, the statement does not add anything additional to the utter lack of support for the legal conclusion of obviousness of claim 1.

OA4/14-17 is in error because the reason given for the combining of elements refers to the bottom of column 17 and top of column 18 of LaPierre, which describes a controller that controls fuel for the reforming reactor (such as natural gas or whatever) which enters in conduit 19 of Fig. 3, rather than controlling the flow of hydrogen in the line 40 which as seen in Fig. 3 and Fig. 1 has no valve to be controlled. In fact, LaPierre teaches away from claim 1 because it does not have a valve in a fuel cell fuel flow inlet line. In LaPierre, the flow being controlled in the cited portion of columns 17 and 18 relate to a reforming reactor hydrocarbon fuel, the combined teachings of Yoshimoto and Reiser are not expanded at all by the inclusion of LaPierre. There is no suggestion of purging a fuel cell fuel inlet chamber in any combination of the references.

Therefore, reconsideration and allowance of claim 1 over Yoshimoto, Reiser and LaPierre is respectfully requested.

As to claim 13, OA 5/6-8 is in error because Reiser's exhaust valve exhausts the outflow of all of the fuel flow fields in the entire stack, whereas claim 13 requires the exhaust valve purge the chamber upstream of a fuel gas inlet manifold which communicates with the flow field inlets. It is irrelevant that Reiser can purge all of the fuel flow channel exits of the entire stack because that is not what claim 13 calls for.

Because the conclusion of obviousness over Yoshimoto in view of Reiser does not meet the language of claim 13, there certainly is no "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" of the invention of claim 13. KSR, supra, at 1396.

OA 5/8-10 is in error because there is no identification of which valve, and what exiting gas are being referred to. Furthermore, it is not understood how any valve that controls exiting gas can be downstream of the exiting gas. In any event, the statement does not add anything additional to the utter lack of support for the legal conclusion of obviousness of claim 13.

As described hereinbefore, LaPierre discloses a controller controlling feedstock to a reforming reactor to generate fuel cell fuel. LaPierre does not disclose a valve for controlling the flow of fuel to a fuel cell, and in that regard, may indeed teach away from such as is expressed in claim 13, because La Pierre has no valves in the fuel cell fuel inlet line 40 (Figs. 1 and 3).

Therefore, reconsideration and allowance of claim 13 over Yoshimoto, Reiser and LaPierre is respectfully requested.

5. Claim 14 is rejected as obvious over Yoshimoto in view of Reiser. OA 6/9-12 is in error. The reasoning, to "ensure a mixture of fresh fuel and recycle fuel", is not an "articulated reasoning...to support

the legal conclusion of obviousness". KSR, supra, at 1396. Yoshimoto has no recycle; Reiser mixes recycle with fresh fuel from the hydrogen source, before it even enters any part of the fuel cell stack in any fashion, and there is therefore no teaching at all, within any of the references, for the subject matter of claim 14. The Office Action has not presented "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (KSR, supra, at 1396; emphasis added). Reconsideration and allowance of claim 14 is respectfully requested.

6. Claim 11 is rejected as obvious over Yoshimoto as applied to claims 2 and 4 in view of Izumitani. Claim 11 has been amended to depend from claim 1 which has hereinbefore been shown to be allowable. Therefore, reexamination and allowance of amended claim 11 as depending from claim 1 is respectfully requested.

To save the Examiner considerable time when this case is taken up, a short phone call is recommended should any issue herein still be unresolved. A few minutes on the phone could clarify a point, or result in a supplemental response which would further limit or dispose of issues. A five minute phone call can save the Examiner a lot of work. Such a phone call would be deeply appreciated.

Respectfully submitted,



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